

**REMARKS**

Claims 30-59 are pending in the application. By this Amendment, claims 1-29 are canceled, and claims 30-59 are added. Support for the new claims can be found throughout the originally filed specification and the drawings. Reconsideration and withdrawal of the rejections in view of the foregoing amendments and the following remarks is respectfully requested.

**I. Formal Matters**

The Office Action objects to the title of the application as not fully descriptive. By this Amendment, the title of the application is amended to read “AIR FLOW SYSTEM FOR CIRCULATING AIR IN A MICROWAVE OVEN.” Accordingly, withdrawal of the objection is respectfully requested.

The Office Action also rejects claims 1-29 under 35 USC §112, second paragraph, as allegedly indefinite. As noted above, claims 1-29 have been canceled and replaced with new claims 30-59. Accordingly, the rejection is moot.

**II. Art Rejections**

The Office Action rejects claims 11-16, 18 and 25 under 35 USC 102(b) over Lee (U.S. Patent No. 6,344,637). In addition, the Office Action rejects claim 1-10, 17, 19-24, and 26-29 under 35 U.S.C. 103(a) over Lee, in view of Kim (U.S. Patent No. 6,621,058). Because claims 1-29 have been canceled, these rejections are moot. However, for the reasons discussed below, it is respectfully submitted that the new claims are also allowable over Lee and Kim.

In addition, Applicant notes that the Lee reference is assigned to LG Electronics, Inc. The present application is also assigned to LG Electronics, Inc. As a result, it is believed that

Lee cannot be used in combination with another prior art reference to reject the claims under 35 USC 103(a).

### III. New Claims 30-59

By this Amendment, new claims 30-59 are added to the application. For the reasons discussed below, it is respectfully submitted that the new claims are allowable over the Lee and Kim references.

The Lee reference discloses a microwave oven, and an air circulation system for cooling electronic components of the microwave oven, and the cooking cavity of the oven. As shown in the drawings, air is sucked into an intake grill 10 positioned at the top of the microwave oven over the door of the oven. Air moves throughout various portions of the interior of the microwave oven and then is exhausted through an exhaust grill 20 formed on the lower front of the microwave oven. A first portion of the air sucked into the intake grill 10 passes along a left side of the cooking cavity, as shown in Figs. 1 and 2. This first airflow then mixes with other air flows from other portions of the oven and is exhausted through the exhaust grill 20 at the lower front of the oven.

A second portion of the air sucked into the oven moves through an intake duct 6 formed at the right, rear of the top of the oven. This second air flow passes through an electronic equipment room 40 to cool electronic components within the equipment room. Portions of the flow of air entering the equipment room then pass into the cooking cavity of the oven. The air flow within the cooking cavity is then either exhausted through the ceiling of the oven, or the air passes into a second side air passage 18b, as more fully described below.

Another portion of the air flow from the equipment room passes across upper and lower light based heating elements 32A and 32B positioned at the top and bottom of the cooking cavity. These two air flows are generated by two auxiliary fans 24 and 28 located at the top and bottom of the electronic equipment room. The airflows passing across the first and second heater elements 32A/32B, and possibly air from within the cooking cavity, are then joined together at the bottom of the front of the microwave oven, along with the air which passes along the left side of the oven, to form a single consolidated exhaust flow which passes through the exhaust grill 20 formed at the bottom front of the oven.

Independent claim 30 recites a microwave oven which includes a barrier positioned below the cooking cavity. Claim 32 recites that the barrier separates the space below the cooking cavity into an outlet duct and an outlet space. Claim 30 further recites a circulation fan which generates a first flow of air that passes from the equipment chamber into the outlet duct, and then out of at least one outlet port. Claim 30 further recites that the circulation fan generates a second flow of air that passes from the equipment chamber through the cooking cavity, into the outlet space, and then out of at least one outlet port. Claim 30 further recites that the barrier prevents the second flow of air from entering the outlet duct. It is respectfully submitted that the Lee reference fails to disclose or suggest any type of barrier as recited in claim 30.

Independent claim 44 is also directed to a microwave oven. Claim 44 recites a first intake port located at an upper portion of a door of the oven, and a second intake port formed in the back plate of the housing of the oven. The Lee reference also fails to disclose or suggest a microwave oven having the recited first and second intake ports of claim 44.

Independent claim 50 is directed to a microwave oven which includes a first intake port located on an upper portion of the door of the oven, a plurality of first outlet ports formed on a lower portion of a front plate, and at least one second outlet port formed in the base plate of the housing. The Lee reference fails to disclose or suggest a microwave oven having the claimed at least one second outlet port formed in the base plate.

Independent claim 55 is directed to a microwave oven which includes a plurality of intake ports located on an upper portion of a door of the oven. In the Lee reference, the intake port is simply an intake grill 10 located above the door of the oven. The Lee reference fails to disclose or suggest that any intake ports that are formed on the door itself.

For all of the above reasons, it is respectfully submitted that independent claims 30, 44, 50 and 55 are allowable over Lee.

The Kim reference also discloses a wall mountable microwave oven. The Kim reference also lacks the above-discussed features of independent claims 30, 44, 50 and 55. Accordingly, it is respectfully submitted that all claims are also allowable over Kim.

### **CONCLUSION**

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that additional changes would place the application in better condition, the Examiner is invited to contact the undersigned at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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**Date: November 8, 2007**

**Please direct all correspondence to Customer Number 34610**

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